

ORIGINAL CONTRIBUTION

Extreme Rescue: Inside the U.S. Air Force Pararescue Program

Barry D. Smith



The captain of the 60-foot sailboat hadn't gotten much sleep in the past two days. That was when one of his crew was seriously burned by a fire and he'd activated his emergency satellite beacon. The fire had destroyed all other communications equipment, so the captain had no idea if help was on the way. With more than 600 miles to sail to get to California, he was losing hope.



While trying to get some rest, the captain heard shouting from on deck. Rushing up the stairway, he saw a large four-engine prop plane pass low over the water next to the boat. It continued to circle as it climbed higher. Everyone's initial elation at knowing their emergency signal had been received and they had been found began to wear off as they wondered what a large plane could do to help their friend and crewmate.

A large object fell from the back of the plane, followed by five smaller ones. Parachutes opened above all the objects. The boat crew could see that the five smaller objects were men. They landed in the water close to the large object. Before long the crew realized the larger object was an inflatable boat with a motor. After a few moments it sped toward the sailboat. Aboard were U.S. Air Force (USAF) pararescuers, also known as PJs. Highly trained in medicine, rescue techniques and small-arms combat, they are responsible for recovering personnel, military or civilian, from any kind of environment.

Birth and Growth

The pararescue concept began toward the end of World War II in Southeast Asia. A few doctors were given parachute training and jumped into the jungles to treat the crews of planes that had crashed. Other ground teams would work their way through the jungle, often for days, to reach the downed crews and carry them out. Toward the end of the war, the first primitive helicopters were used to evacuate the downed airmen. After the war ended, the Air Rescue Service was created and the first "pararescuemen" were trained. They were also known as "PJs" from the designation used on aircraft flight logs. They received some advanced medical and technical-rescue training as well as training in working in every possible environment, including jungle, high mountains, the Arctic and the ocean. Their main role was to rescue crews shot down behind enemy lines. They would also assist in civilian missions when requested.



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July 2022
Volume 51
Issue 7

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With the recent COVID surge, has your hospital diversion problem become worse?

- ☐ Significantly worse, frequent long waits
- ☐ Moderately worse, occasional long waits
- ☐ Minimally worse, infrequent long waits
- ☐ No real change (or it's gotten better)

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to rescue helicopter squadrons along with pilots, crew members and aircraft maintainers. Beginning in 2000 the PJs were put into separate squadrons to become their own weapon system. Officers received the same training as the PJs, except for the medical section, as well as additional training in how to deploy and lead teams of PJs. These officers are known as Combat Rescue Officers.

“Becoming our own weapon system has allowed us to branch out and gain other rescue and personnel recovery skills than when we were part of a helicopter squadron,” explains SMSgt. Josiah Blanton, operations superintendent of the 304th Rescue Squadron, located in Portland, Ore. “I think it’s been a good progression that has allowed us to gain more skill sets and enhance and enlarge our rescue mission. It gives us more flexibility to perform a wider range of missions, regardless of whether we’re deployed from aircraft, boats or ground vehicles. Also, now that we have officers, we have representation at major command levels as well as on battle staffs during combat operations.”

Training

As might be imagined, candidates wishing to become PJs must be in excellent physical condition and pass rigorous medical and physical tests to even be considered. Once they’re accepted into training, the course can take up to 24 months or longer to complete. It begins with the pararescue indoctrination course, 10 weeks of intense physical and stress training. Next is the U.S. Army Airborne School for basic parachute training. This is followed by USAF combat dive school to learn scuba and underwater combat skills. After this is the USAF basic survival school, where they learn how to live off the land. Next is the U.S. Army free fall parachute school to learn advanced skills such as jumping from high altitudes and at night. From here the candidate goes to the pararescue EMT-paramedic course, followed by a 20-week course in advanced medicine through the pararescue recovery specialist course. After completion of all these schools, the candidate is designated as a pararescuer.

Once a new PJ arrives at his first unit, he is in training for another 450 days. This is called a progression tour. A new PJ must have an instructor with them at all times until they’ve completed this training. Much of it covers the same skills learned in initial training but to a higher proficiency level. This training also allows the new PJ to work as an element leader, which would put him in charge of a two-person PJ team on a helicopter. The other training is to become proficient in the local unit’s equipment and skills. For instance, at the 304th they conduct a large amount of mountain rescue work, while a unit based in Florida would perform more ocean missions.

“One of the benefits of being NREMT paramedics is that it allows better access to hospitals and local EMS agencies to maintain our skills,” says Blanton. “All the PJs go through a paramedic refresher class every two years, just like any other NREMT paramedic. We put some of those classes on here at our base as well as send some of our PJs to refresher classes around the country to broaden our view of medicine and what’s going on in different parts of the country. We have also built a ride-along program with the paramedic service in Skamania County, Wash. This allows our PJs to assess and treat patients and get real-world experience. We also allow civilian agencies to use our human patient simulators for training. In addition we have provided Tactical Combat Casualty Care training to paramedic and law enforcement agencies.

“We use the ZOLL M Series monitor/defibrillator and Impact 3000 transport ventilator. We also can administer blood products. In addition we carry some medications that are not normally found in civilian agencies, such as ketamine for pain control and RSI as well as antibiotics. We started carrying ketamine during the war in Afghanistan. We found it to be very effective for pain control. It also doesn’t affect respiration like opiates can. In addition, it can have a hypnotic effect, so the patient doesn’t remember as much of the event.



they need to evacuate. They have ATVs that can be deployed by parachute for missions where they may have to travel some distance from their insertion site. They have inflatable boats with outboard motors that can be dropped by parachute and inflated with an air tank for ocean-rescue scenarios or when using a body of water to insert a team.

A newer water-rescue boat is called the Guardian Angel Rescue Craft. It is like a personal watercraft but larger and designed to pick up several victims in a mass-casualty situation. Since it’s powered by water jets, it has no props that could injure victims in the water. It can also be deployed by parachute. They have Humvees and Polaris Sportsman 800 ATVs, and some units have dirt bikes in the 250–400cc range. They also have the military version of the Polaris MRZR Razor ATVs in two- and four-seat versions. A new vehicle still in testing is the Guardian Angel Air-Deployable Rescue Vehicle, which is a very large ATV that looks like a stripped-down Humvee. It is designed to carry a crew of three and a patient. It has mounts for machine guns and is also deployable by parachute. Most PJ squadrons also have snowmobiles.

Twice a year the USAF special operations communities meet to discuss equipment and vehicle needs. They develop requirements and identify off-the-shelf commercial solutions that could meet those requirements. In addition there is a unit that tests and evaluates commercial equipment and works with vendors to develop special equipment to meet PJs’ needs.

The C-130 Hercules four-engine turboprop is the standard fixed-wing aircraft used by the USAF rescue community. It is used as a long-range platform to drop PJs and equipment by parachute and/or land on short dirt airstrips. The C-130 is also used as a fast multipatient air ambulance once the PJs have begun treatment.

Another fixed-wing being used is the much larger four-engine C-17 Globemaster III transport. It can also drop personnel and equipment by parachute. It is larger, faster and has a longer range than the C-130. NASA has plans to begin manned space flights soon, and the USAF will be providing PJs to perform any necessary over-water rescues. With its greater range and speed, the C-17 will be the jump platform for this mission. In addition, the C-17 can carry two HH-60 Pave Hawk rescue helicopters inside its cargo cabin. For very long missions—say, deep into the Pacific Ocean or other extremely remote locations—these helicopters could be transported by a C-17 to a location closer to an incident.

Many PJ units work with local authorities to assist on civilian search and rescue (SAR) missions as well as regional disaster response. For example, the 304th works with mountain-rescue teams in the Pacific Northwest. One of the big things they bring to SAR missions is their medical capabilities.

“We’ve been taking a more active role in the Pacific Northwest for disaster planning and participating in disaster exercises,” Blanton says. “We also participate in large disasters all over the country and world. We were involved in Hurricane Sandy as well as Hurricane Katrina. We were lowered from helicopters to cut holes in roofs to reach victims and search homes and apartment buildings. We did both night and day missions. We train for night operations and are very comfortable working rescue missions at night. In some ways that was better, because there weren’t a lot of helicopters doing missions at night. During the day we really had to be careful to avoid midair collisions because of the large number of civilian and military helicopters in such a small area.

“USAF rescue units saw a lot of action in Afghanistan, which was a combination of straight medevac and combat rescue missions. We did a lot more combat medevac missions, but we also did things like vehicle-extrication missions for IED blasts involving vehicles with trapped soldiers. We carried vehicle-extrication tools as well as rope-rescue gear in the



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among them. In addition, U.S. civilian authorities are turning to the military more and more for local and regional emergencies. As the role of the PJ shifts, they will adjust their training, skills and equipment to match the challenges.

For more, see [A Conversation With the PJ Medical Director](#), also from the August EMS World.

Barry D. Smith is an instructor in the education department at the Regional Emergency Medical Services Authority in Reno, Nev. Contact him at bsmith@remsa-cf.com.

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